



COATINGS

# OXIMULSION<sup>®</sup> 9000 SERIES

A SOLUTION  
FOR WATERBORNE  
ALKYDS



OXITENO

Evolution by chemistry

**OXIMULSION® 9000** enable the formulation of stable alkyd emulsions preserving the polymer backbone and its advantages in the final coating.



## BENEFITS

- Generate emulsions with low particle size
- Low energy demanding emulsification process
- High stability
- High solids emulsions
- Alkyd enamels with low VOC, low odor and reduced environmental risks



# FEATURES

- APE-free surfactants
- Package: Sample, Drum, Bulk

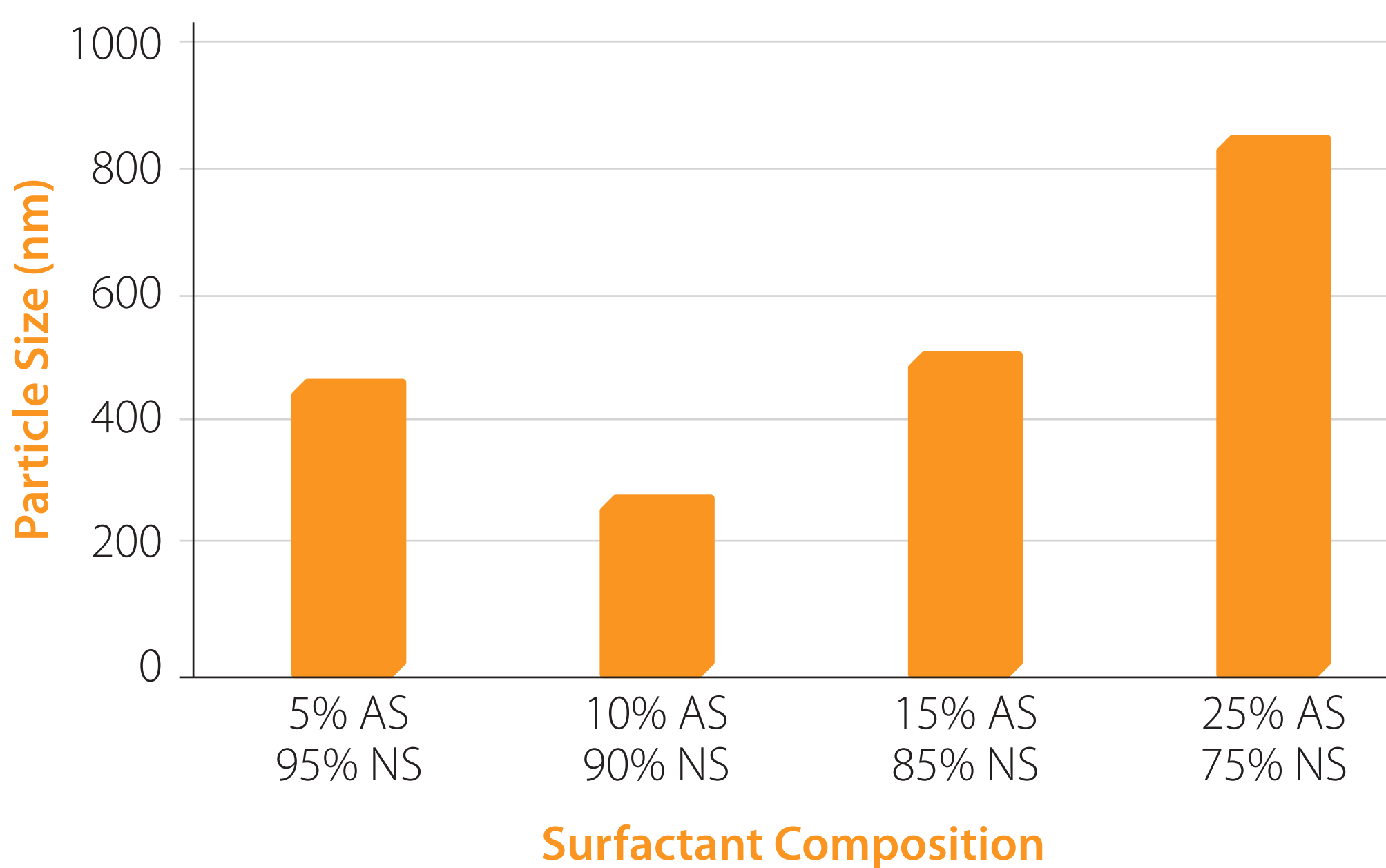
PROPERTIES	OXIMULSION® 9800	OXIMULSION® 9900
Description	Anionic Surfactant	Nonionic Surfactant
Appearance @ 25 °C	Brown Liquid	Paste
Actives, wt%	96.0 - 98.0	99.5
CMC, g/L	0.40	0.02
Surface Tension, 0.1%, mN/m	30	48
Melting/Freezing Point, °C	N/A	35





# PERFORMANCE TESTS

## Particle Size Control



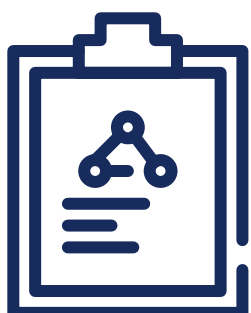
**AS:** Anionic Surfactant

**NS:** Nonionic Surfactant

**Instrumental test:** Light Scattering.

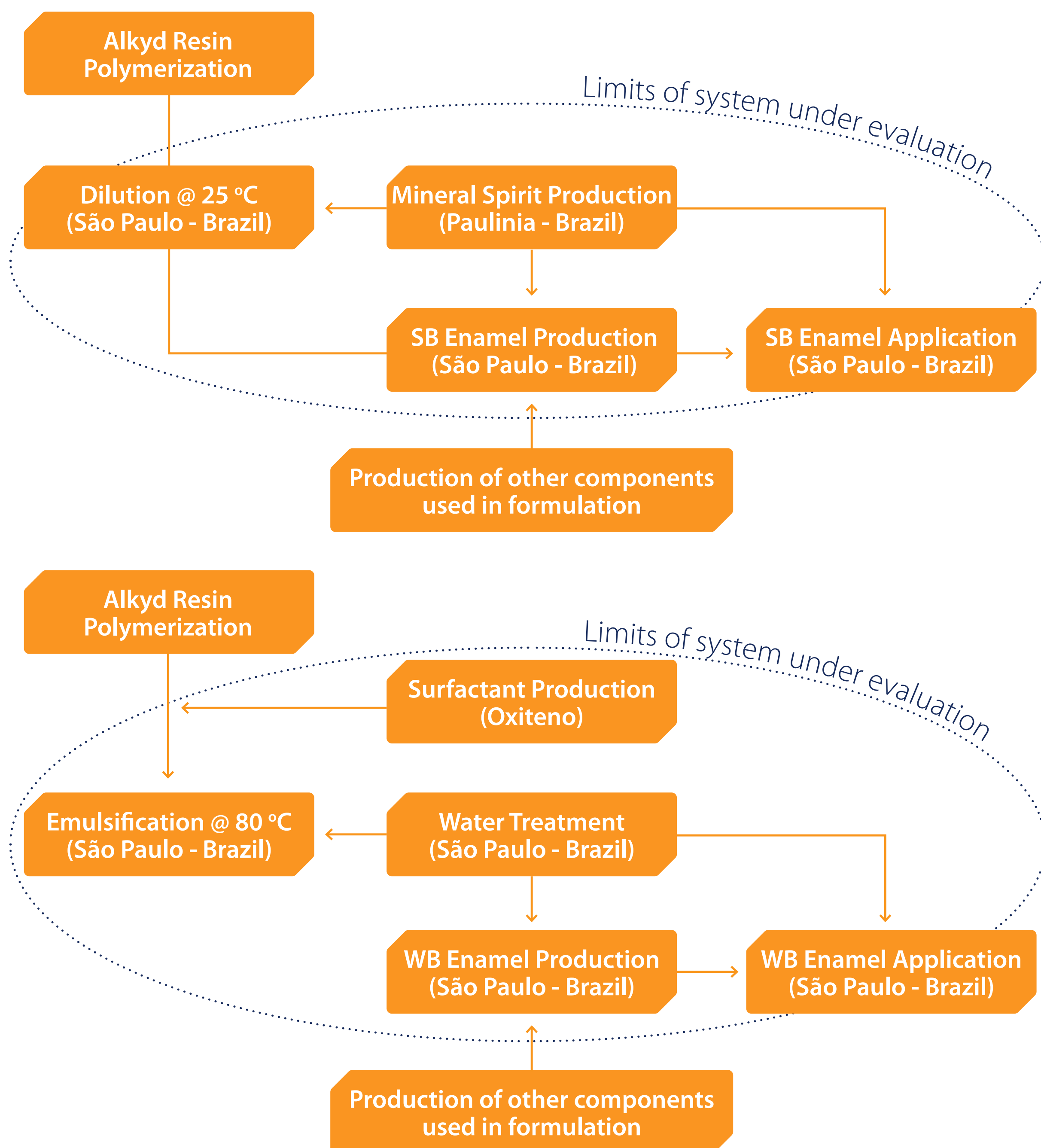
**Tested emulsion:** Long-in-oil alkyd @ 50% in water with 4% total surfactant content.

Usually, emulsions with **particle size lower than 500 nm** are prone to have **higher colloidal stability** because the Brownian motion suppresses gravity effect preventing sedimentation. The results above show the importance of **optimizing the surfactants composition** in order to generate emulsion with a particle size lower than 500 nm.



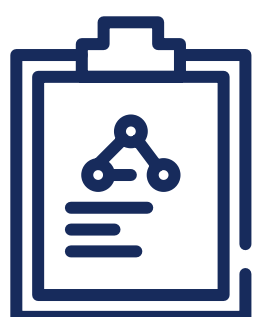
# PERFORMANCE TESTS

## Life Cycle Assessment



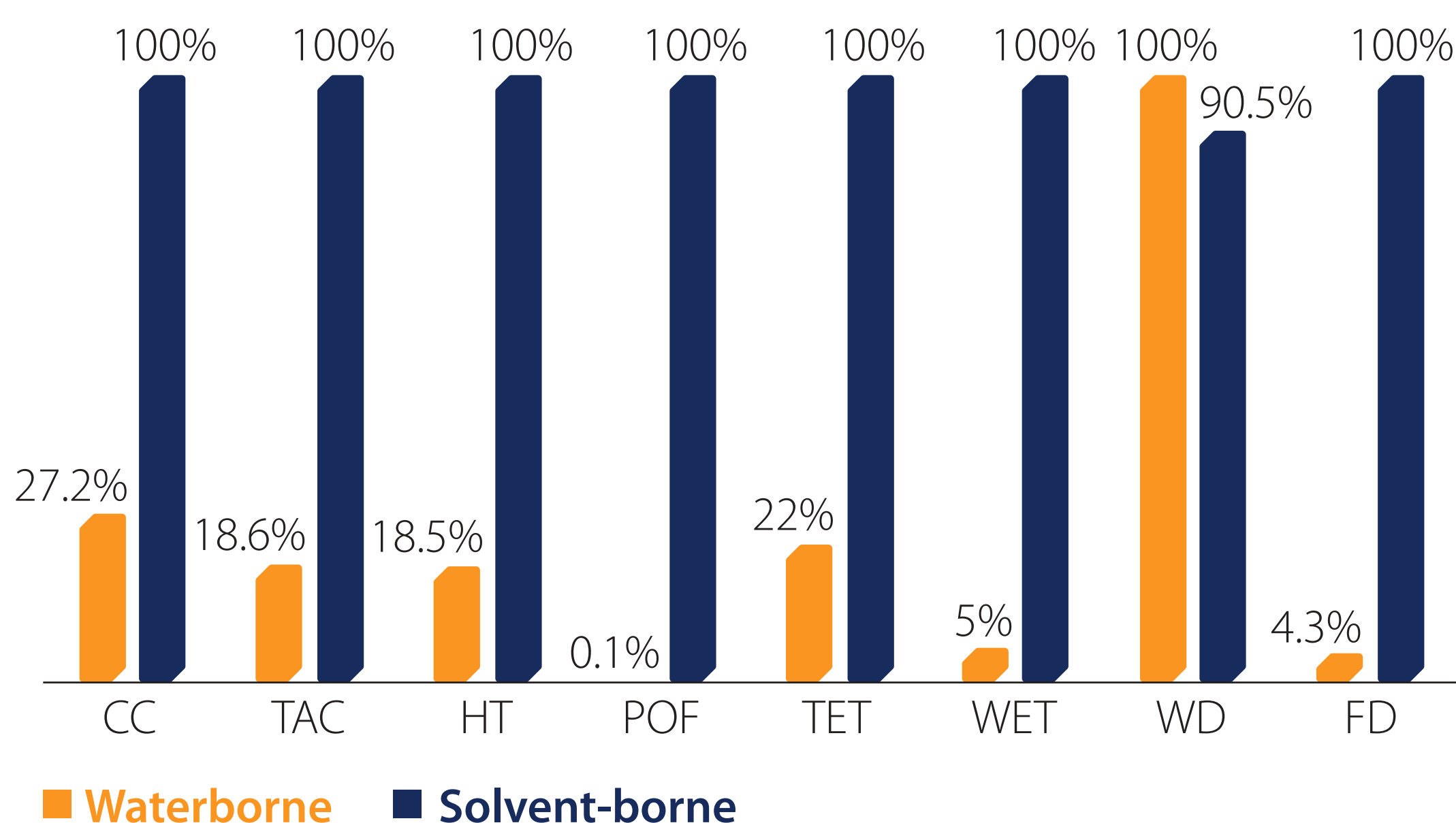
Schematic view of solvent borne (SB) and waterborne (WB) enamel systems evaluated through Life Cycle Assessment (LCA).

For more information about the enamel formulations please contact us: [www.oxiteno.com](http://www.oxiteno.com)



# PERFORMANCE TESTS

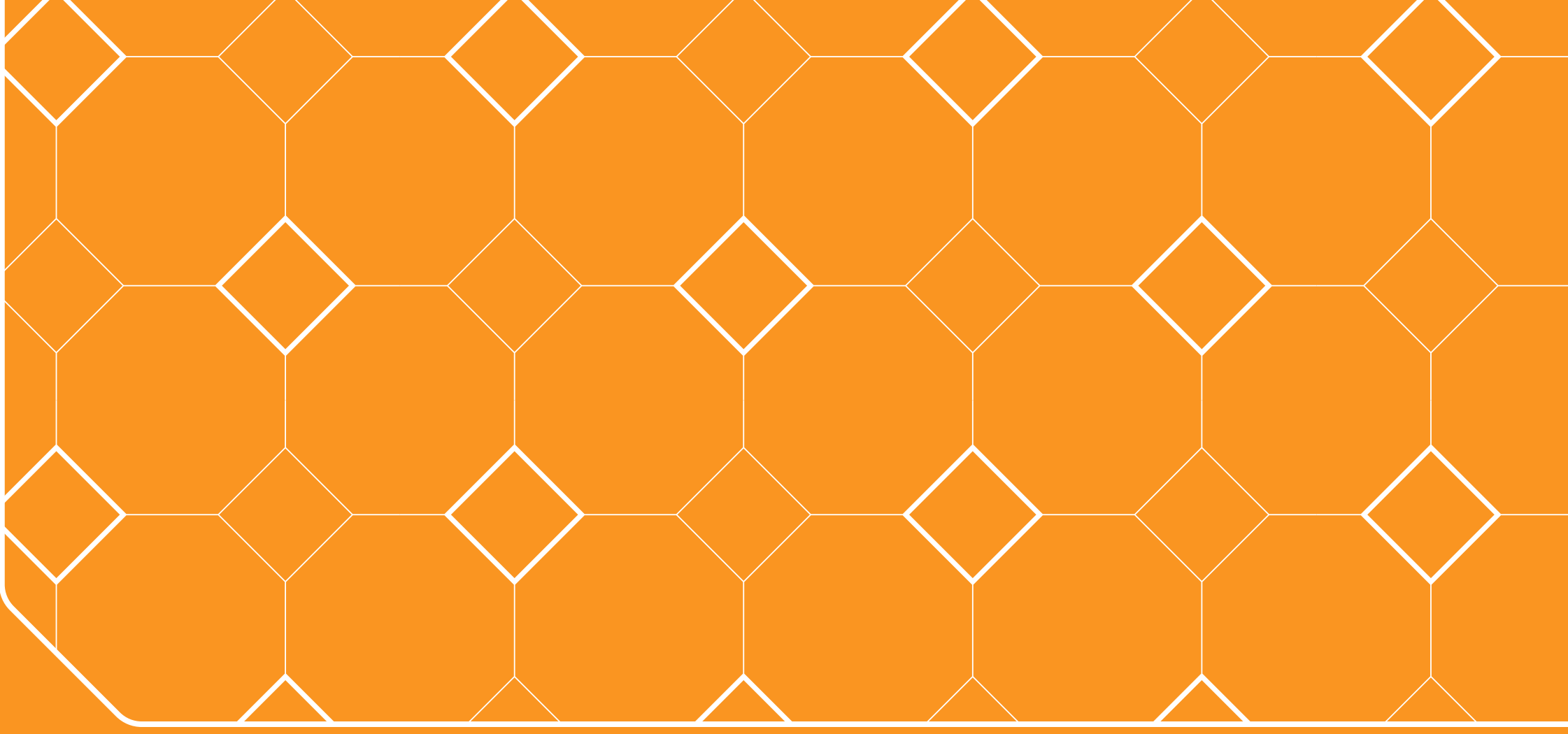
## Life Cycle Assessment



The Recipe Midpoint (H) was the life cycle assessment method used in this work<sup>(1)</sup>. The following environmental impact categories were evaluated: Climate Change (CC), Terrestrial Acidification (TA), Human Toxicity (HT), Photochemical Oxidant Formation (POF), Terrestrial Eco-Toxicity (TET), Water Eco-Toxicity (WET), Water Depletion (WD) and Fossil Fuel Depletion (FD). These environmental impact categories were chosen based on their relevancy for paints and coatings application.

For the solvent borne enamel, the results show that the main environmental problems related to it come from the use of mineral spirits as solvent.

<sup>(1)</sup> Popi, M. G. C. B. Effectiveness assessment of alternative processes to improve environmental performance in the production of sodium lauryl ether sulfate. Master's Degree Dissertation. Universidade de São Paulo: s.n, 2015.



If you are looking for a solution for  
waterborne alkyds **OXIMULSION® 9000**  
**SERIES** is what you need!  
Contact us and request a sample.



**[oxiteno.com/us/en/contact/](https://oxiteno.com/us/en/contact/)**



**OXITENO**

Evolution by chemistry